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# Power generation by Hydrocomb

## Technology: step I

- One of the applications of Hydrocomb Technology is a portable power station intended for various applications
- The basic configuration consists of an expandable combustion module (3).  
Hydrogen gas is fed into the combustion chambers, mixed with microdroplets of water and oxygen.

## Controlled combustion: step II

- An electronic ignition system ensures that the timing of an “explosion” is optimised to give the resulting pressure wave combining the water gas from the chemical reaction with heat-expanded water droplets from the microdroplet spray.
- The design of the module and the choice of materials ensures that the combustion centre is at a temperature exceeding 900Kelvin.

# The Hydraulic System: step III

- Connected to the combustion module is a hydraulic flow circuit (4) linked to accumulators (1) via a control valve system (7).
- The accumulators serve as storage of about 30 Gallons of hydraulic fluid to even out the periodic surge pressure of the combustion module

# The Hydraulic Rotor and Generator: step IV

- The hydraulic rotor is driven by the hydraulic flow. The rotor is directly connected to the power generation unit.
- The hydraulic fluid exits the hydraulic rotor and returns to another accumulator (8) operating at lower pressure - preparing the fluid for another combustion cycle.
- The power generator is connected to the rotor via an axle. Its current is fed to a user interface not shown on the drawing.